United States Department of Agriculture

South Branch Kinzua Creek Project – Supplemental Environmental Assessment

Marienville Ranger District

Allegheny National Forest

Lots 263, 302, and 303 and Warrants 3093, 3097, 3122, 3123, 3124, 3130, 3131, and 3132, Hamlin and Wetmore Townships

McKean County, Pennsylvania

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Forest Service Allegheny National Forest Marienville Ranger District

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Introduction

The U.S. Forest Service is preparing a supplemental environmental assessment for the South Branch Kinzua Creek project. A decision notice for the project was originally signed in 2008. This supplement was prepared to add approximately 189 acres of shelterwood removal cuts with additional reforestation treatments (fertilizer, planting, tree shelter installation, and release) to 11 stands previously approved for shelterwood seed cuts or "shelterwood starts". treatments. This document supplements and tiers to the original analysis and decision.

Additional information is available online at the following links:

- For this supplement: https://www.fs.usda.gov/project/?project=57331.
- For the original analysis and decision: https://www.fs.usda.gov/project/?project=17077.

Proposed Project Location

The South Branch Kinzua Creek project area includes 4,748 acres of National Forest System and private lands located in Lots 263, 302, and 303 and Warrants 3093, 3097, 3122, 3123, 3124, 3130, 3131, and 3132 in Wetmore and Hamlin Township, McKean County, Pennsylvania. It is located on the Marienville Ranger District of the Allegheny National Forest, north of Kane, Pennsylvania in the South Branch Kinzua Creek watershed. All the stands proposed for treatment in this supplemental environmental assessment are located within Management Area 3.0 – Even-aged Management.

Public Involvement

On December 19, 2019, the Forest Service mailed the scoping package for the South Branch Kinzua Creek Supplemental Environmental Assessment project to individuals and organizations on the NEPA mailing list and who submitted comments on the original South Branch Kinzua Creek project. The scoping documents were posted to the Allegheny National Forest website on December 18. 2019. The project was listed in the Schedule of Proposed Actions starting with the January 2020 issue. The scoping news release was sent to local media on December 18, 2019.

The Forest Service consulted with several federal, state, tribal, and local agencies during the development of this supplemental environmental assessment. For additional information, please see the list of agencies and persons consulted.

Two individuals submitted comments during the scoping period. Their comments and concerns are summarized and addressed in appendix A–Scoping Comments Summary of this supplemental environmental assessment. All comments, in their entirety, may be found in the project file.

Purpose and Need

The proposed action for the South Branch Kinzua project was designed to help achieve Allegheny National Forest Land and Resource Management Plan (or Forest Plan) goals and objectives. The proposed activities are needed to manage vegetation for Forest Plan desired conditions, improve terrestrial habitat, and would:

- Maintain a diversity of age classes, including early age classes spatially distributed across the landscape in Management Area 3.0 within the project area. As existing young age classes develop and mature into older age classes, there is a need to maintain a young age class component into future decades.

- Maintain or enhance seedling, shrub, and herbaceous diversity in the project area where a legacy of deer browsing has resulted in reduced understory diversity.

- Provide a wide variety of habitat conditions across the landscape to meet the needs of game and non-game wildlife species and maintain or enhance species diversity and abundance within the project area.

- Provide a mix of vegetative conditions and quality timber products that would contribute to the local and regional economy.

Proposed shelterwood removal cuts (regeneration harvests), along with reforestation treatments would allow for the establishment of early structural forest, which is characteristic of Management Area 3.0 and helps achieve the desired condition of a diversity of healthy vegetation patterns across the landscape (USDA-FS 2007a, pages 113-116).

Modified Proposed Action and Alternatives

This supplemental environmental assessment considers two alternatives: the modified proposed action and the no change alternative. The modified proposed action would result in changes to treatments in 11 stands, while the no change alternative would continue to implement the South Branch Kinzua Creek project as previously approved. These alternatives are briefly described below and are summarized in Tables 1 and 2.

Modified Proposed Action

The Forest Service is proposing to add shelterwood removal cuts and associated reforestation treatments (fertilizer, planting, tree shelter installation, and release) to 11 stands within the South Branch Kinzua Creek project area to ensure timely removal of their overstories after adequate regeneration has been established in these stands.

The stands proposed for a change in treatment include 810043, 811019, 812010, 812037, 812066, 812067, 812068, 813014, 813022, 813023, and 813027, which total about 189 acres. A combination of the following treatments would be implemented over a 5 to 15-year time period.

- ***Shelterwood sequence*** is a multiple-step regeneration harvest in which approximately one-third of the overstory is removed in the initial shelterwood seed cut to provide sunlight on the ground to encourage tree seedling development. The shelterwood seed cuts for these stands were approved in the original South Branch Kinzua Creek decision and are being or have been implemented already. After adequate tree seedlings develop, the shelterwood removal cut follows, in which nearly all the overstory trees are removed, allowing full sunlight to reach the established seedlings.

- ***Fertilization*** is used to accelerate the growth of natural seedling regeneration. It is used before or after the final harvest cut is complete and normally only on unfenced stands that are more susceptible to deer browsing. Fertilization generally involves the aerial or ground application of nutrients on existing seedlings, usually during the month of May or June.

- ***Tree planting*** is prescribed in areas where planned natural regeneration has failed, or where it is desirable to supplement natural tree seedling establishment in order to improve species diversity.

- ***Tree shelters*** are used where deer browsing impacts are a concern. They are installed and maintained to exclude deer and reduce browsing on desired seedlings. This method allows for desirable tree seedlings to develop and grow to a competitive size and beyond the risk for deer browsing. Tree shelters are removed when objectives have been met.

- ***Release for species diversity*** involves the non-commercial, manual cutting of tall-growing woody vegetation that interferes with the growth and survival of desired tree seedlings, saplings, or shrubs in young stands (age class 20 years or less). Release promotes tree species diversity.

Approximately 280 acres of regeneration harvests in Management Area 3.0 were approved in the original South Branch Kinzua Creek decision, and this supplement analysis proposes to add an additional 189 acres. If these changes are approved, the original decision and this supplement would combine to result in regeneration harvests on approximately 469 (or 10 percent) of National Forest System lands within the project area.

To prevent the creation of any temporary openings greater than 40 acres in size in the modified proposed action, the following design features will be implemented:

- Reserve areas will be placed in the northern tip of stand 812066 and in the southwestern tip of stand 812067 **(USDA-FS 2007a, page 68)**.

- Shelterwood removal cuts for stands 812010, 812037, 812039 (from the original decision), 812066, and 812067 will be staggered so that no temporary openings greater than 40 acres are created during implementation. Regenerating stands must be greater than 15 feet in height before adjacent shelterwood removal cuts occur if they would result in a temporary opening greater than 40 acres in size **(USDA-FS 2007a, page 68)**.

Design Criteria for the Modified Proposed Action

Proposed activities can be designed for implementation in a way that reduces, minimizes, or eliminates adverse environmental impacts. The actions built into this design are often referred to as design criteria.

Design criteria include Forest Plan standards and guidelines. Regarding design criteria, all activities must be implemented in accordance with management area direction for Management Area 3.0, which includes:

- Management area descriptions (USDA-FS 2007a, page 26)
- Management area direction and design criteria (USDA-FS 2007a, pages 113–115)
- Overall forest-wide design criteria (USDA-FS 2007a, pages 53–99)

Project design features highlight, clarify, or go beyond the text of Forest Plan standards and guidelines. Project design features for the modified are listed in appendix B of this document.

No Change Alternative (Implementation as Previously Approved)

Under this alternative, none of the activities proposed in this supplemental analysis would be implemented. All approved activities in the original South Branch Kinzua Creek decision notice,

however, will continue to be implemented. For details on what activities were previously selected for implementation, and thus, make up the no change alternative, please refer to the original South Branch Kinzua Creek Environmental Assessment and Decision Notice on the Allegheny National Forest website at https://www.fs.usda.gov/project/?project=17077.

Design Criteria for the No Change Alternatives

All applicable design criteria in the original South Branch Kinzua Creek decision will be followed for remaining activities from the original decision that continue to be implemented.

Comparison of Alternatives

A comparison of the activities included in each alternative is provided in Tables 1 and 2 below. No changes to the wildlife habitat enhancements, non-native invasive plant species treatments, soil and water restoration activities, or transportation activities approved in the original South Branch Kinzua Creek decision with this supplemental analysis.

Table 1. Summary of proposed activities for the supplemental South Branch Kinzua Creek project compared to those activities approved in the original South Branch Kinzua Creek decision

Vegetation Management (acres)	Total as Proposed in Original Decision	New for this Supplemental Analysis	Totals for Original Plus Supplemental
Even-aged Regeneration Harvests (acres)			
Shelterwood Seed Cuts	437	0	437
Shelterwood Removal Cuts	280	189	469
Even-aged Intermediate Harvests (acres)			
Commercial Thinning	556	0	556
Salvage Thinning	8	0	8
Uneven-aged Harvests (acres)			
Improvement Cut	50	0	50
Restore Understory Mature Forest Condition	225	0	225
Group Selection	283	0	283
Non-commercial Treatments (acres)			
Non-commercial Thinning	0	0	0
Crop Tree Management	393	0	393
Crop Tree Release	156	0	156
Reforestation Activities (acres)			
Site Preparation	750	0	750
Herbicide–Reforestation	834	0	834
Fencing Installation	686	0	686
Fertilization	96	189	285
Install Tree Shelters	73	19	92
Tree Planting for Species Diversity	191	19	210
Release for Species Diversity	610	189	799

Table 2. Proposed silvicultural treatments for the supplemental South Branch Kinzua Creek project

Stand[1]	MA	Acres	1st Entry	2nd Entry	3rd[2] Entry	Fertilize	Install Tree Shelters	Plant	Release
810043	3.0	7	-	-	SWR	7	1	1	7
811019	3.0	34	-	-	SWR	34	3	3	34
812010	3.0	22	-	-	SWR	22	2	2	22
812037	3.0	30	-	-	SWR	30	3	3	30
812066	3.0	12	-	-	SWR	12	1	1	12
812067	3.0	9	-	-	SWR	9	1	1	9
812068	3.0	16	-	-	SWR	16	2	2	16
813014	3.0	16	-	-	SWR	16	2	2	16
813022	3.0	21	-	-	SWR	21	2	2	21
813023	3.0	12	-	-	SWR	12	1	1	12
813027	3.0	10	-	-	SWR	10	1	1	10

1. The six-digit stand number listed in this table consists of the compartment number (first three digits) and the stand number (last three digits). For example, stand 636001 is stand 1 in compartment 636.
2. SWR = shelterwood removal cut (shelterwood seed cuts [during 2nd entry] were approved in the original South Branch Kinzua Cree decision and are or have been implemented).

Environmental Effects

This supplemental environmental assessment analyzes and discloses the effects of adding an additional 189 acres of shelterwood removal cuts and associated reforestation treatments in the South Branch Kinzua Creek project area. As a supplemental analysis, it narrowly focuses on the differences between our original analysis and what we would expect to see if treatments are changed in 11 stands.

The purpose of an environmental assessment is to determine whether to make a finding of no significant impact or prepare an environmental impact statement. As a result, our analysis is presented in terms of context and intensity.

Some resources will not be impacted by implementation of the proposed activities and thus, do not warrant further discussion here. Those resources are fully disclosed in the original environmental assessment available on the Allegheny National Forest website, and include air quality, heritage, economics, environmental justice, and human health and safety. To avoid duplication, these resource areas are not discussed below. Instead, the analysis included in the original environmental assessment is incorporated by reference.

Context

The South Branch Kinzua Creek project area includes less than one percent (4,748 acres) of National Forest System lands within the approximately 513,653-acre Allegheny National Forest. The total of 469 acres proposed for regeneration harvests for the complete South Branch Kinzua Creek project, which includes 280 acres from the original decision and 189 acres proposed in this supplemental, comprises approximately 10 percent of National Forest System lands within the project area and approximately 0.09 percent of all National Forest System lands within the Allegheny National Forest. Combined with reforestation, wildlife habitat enhancement, non-native invasive plant treatment activities, and timber management activities, approximately 2,500

acres of National Forest System lands within the project area could be treated in some manner over 20 years when combining the activities of the original decision with those of this supplemental decision. Please note that multiple treatments may occur on any given acre.

This project was proposed to be implemented over a short timeframe, roughly 20 years, and to work toward long-term desired conditions identified in the Allegheny National Forest Record of Decision for the Final Environmental Impact Statement and the Land and Resource Management Plan. The modified proposed action would help achieve Forest Plan goals and meet specific objectives for early structural habitat, structural and age class diversity, and wildlife habitat diversity. All applicable Forest Plan standards and guidelines were applied to project design.

Intensity Factor #1: Impacts that may be both beneficial and adverse.

Soils

Modified Proposed Action

Effects to soils from the supplemental proposed activities are anticipated to be minimal with implementation of Forest Plan standards and guidelines, Pennsylvania best management practices (PA-DEP 2005), and project design features (appendix B). Existing skid trails would be used whenever possible in order to keep cumulative detrimental soil disturbance to less than 15 percent of the treatment area.

No adverse cumulative effects to soils are anticipated because:

- the modified proposed action will not result in permanent loss of vegetative cover; and
- Forest Plan standards and guidelines, Pennsylvania best management practices, and project design features would be applied to reduce or eliminate adverse effects (accelerated soil erosion, compaction, puddling and rutting).

No Change Alternative

Under the no change alternative, additional soil disturbance would not occur. There would be no additional effects beyond those described in the South Branch Kinzua Creek Environmental Assessment.

Water

Modified Proposed Action

There are no National Wetland Inventory wetlands or floodplains in the 11 stands proposed for shelterwood removal cuts and additional reforestation treatments. Streams, springs, and seeps will be buffered. Effects to water quantity and quality are anticipated to be minimal with implementation of Forest Plan standards and guidelines, Pennsylvania best management practices, and project design features.

Measurable changes in water quantity and stream flow are predicted to occur if timber harvesting reduces the basal area of a watershed by more than 25 percent in a 5-year period. These concerns are evaluated in greater detail in the Forest Plan Final Environmental Impact Statement, which concludes that changes are expected to recover within three to ten years, will be roughly proportional to the percent reduction in basal area, and are most likely to occur in small

watersheds[1]. For this evaluation of basal area reduction in watersheds, five years was selected an appropriate time for reduction of effects. Since at the stage of removal harvests regeneration of younger trees has already begun, effects from these harvests are expected to be decreasing after 5 years. In addition, a study in central Pennsylvania demonstrated that hydrologic recovery takes approximately 4 years (Lynch and Corbett 1990).

Table 3. Percent basal area reduction resulting from timber harvest treatments in small watersheds without staggering harvests

Small Watershed Name	Watershed Size (acres)	Modified Proposed Action Basal Area Reduction (acres)	Modified Proposed Action Basal Area Reduction National Forest System Lands Only 2027 (percent)	Modified Proposed Action Basal Area Reduction National Forest System Lands And Private Lands 2027 (percent)	No Change Alternative Basal Area Reduction National Forest System And Private Lands 2027 (percent)
Glad Run Tributary 4	59	7.1	12	12	0
Watermill Tributary 1	92	17.9	20	20	1
Glad Run Tributary 2	92	22.3	24	24	0
South Branch Kinzua Creek Tributary 4	98	11.1	12	14	2
Glad Run Tributary 1*	111	35.5	32	32	0
Unnamed Tributary of Hubert Run	130	27.5	21	23	2
South Branch Kinzua Creek Tributary 5 Upper	303	12	4	6	2
South Branch Kinzua Creek Tributary 5 Lower	311	0	3	3	3
Watermill Run	1350	15.2	1	7	6
Glad Run	2172	17.9	3	10	9

[1] See Forest Plan Final Environmental Impact Statement, pages 3-38, 3-39, 3-44, 3-45, and 3-51, which are incorporated by reference.

* Small watersheds predicted to exceed 25 percent reduction in basal area without staggering treatments.

To resolve potential effects, the following project design features will be applied (see appendix B):

- In the Glad Run Tributary 1 small watershed, shelterwood removal cuts for stands 812010, 812037, 812039 (from the original decision), 812066, and 812067 will be staggered to ensure that no more than 25 percent of the watershed would be in the 0 to 5 year age class at any point during implementation of the project and that no more than 25 percent of the basal area within the watershed would be removed in any five year period during implementation of the project (USDA-FS 2007, page 74).

- In Glad Run Tributary 2 (stand 813022 and 813023) and Unnamed Tributary to Hubert Run (stand 811019), shelterwood removal harvests will not be completed earlier than 2025 due to completed removal harvests in 2019 (USDA-FS 2007, page 74).

Implementation of supplemental proposed and previously approved vegetation management activities in combination with private activities are not likely to contribute to any cumulative adverse effects to water quality and water quantity within the project and cumulative effects analysis areas because:

- Proposed activities will comply with Forest Plan standards and guidelines and are designed to minimize effects to water resources and water quality (USDA-FS 2007a).

- Forest Plan standards and guidelines meet or exceed Pennsylvania best management practices.

- Treatments would be spread across the landscape and be done over time.

- The Forest Service analyzes all projects to ensure the amount of forests in age class of 0 to 5 years old established from commercial timber harvests is less than 25 percent of a watershed.

- Most treatments are in the uplands away from streams and wetlands. Streams, springs, and seeps that occur in or near proposed stands will be buffered from proposed activities.

No Change Alternative

Under the no change alternative, no additional basal area reductions or effects to water quality or quantity would occur. There would be no additional effects beyond those described in the South Branch Kinzua Creek Environmental Assessment.

Vegetation

Modified Proposed Action

The Forest Plan includes objectives for a mixture of early, mid, and late structural habitat across the Allegheny National Forest. The desired age class distribution is described on page 19 of the Forest Plan (USDA-FS 2007a), which is incorporated by reference. Vegetation within the project area is relatively uniform in age, structure, and maturity. The modified proposed action would establish an additional 189 acres (or 4 percent of the National Forest System lands) of early structural habitat or young forest within the project area. Combined with the original decision, this would establish 469 acres (or 10 percent of the National Forest System lands) of early

structural habitat or young forest within the project area. The additional timber harvests in the modified proposed action would reduce mid-structural habitat by 138 acres (3 percent of the project area) and late structural habitat by 51 acres (1 percent of the project area). Approximately 76 percent of the project area would remain as mid-structural and late structural habitat under the modified proposed action. Under the modified proposed action, some of the Allegheny hardwoods stands may shift to mixed upland hardwoods due to the current forest health concerns with black cherry and black cherry seed production.

The modified proposed action would ensure timely removal of the existing overstories once adequate regeneration is established in these stands. The young forest established under the modified proposed action would help achieve the forest-wide objective for early structural habitat and help enhance the resiliency of the forest (USDA-FS 2007a, page 14). The diversity of the understory would be increased wherever herbicides, site preparation, fencing, and other reforestation treatments are implemented.

No Change Alternative

Under the no change alternative, none of the supplemental proposed activities would occur. Therefore, there would be no additional effects to structural habitat, forest type, or forest health beyond those described in the South Branch Kinzua Creek Environmental Assessment.

Non-native invasive plants

Modified Proposed Action

Ground-disturbing activities associated with the modified proposed action may increase the susceptibility of the project to invasion and spread of non-native invasive plants. Several non-native invasive plants currently occur in the project area. The potential for the introduction and spread of non-native invasive plants would be minimized by application of standard resources protection measures designed to prevent, detect, and eliminate non-native invasive plant infestations from the project area.

No Change Alternative

Under the no change alternative, non-native invasive plant treatments approved with the original South Branch Kinzua Creek decision would continue. There would be no additional effects beyond those described in the South Branch Kinzua Creek Environmental Assessment.

Threatened and Endangered Species

Please see the discussion provided below in context of intensity factor #9.

Regional Forester Sensitive Species

With recent updates, there are currently 70 regional forester sensitive species for the Allegheny National Forest, 36 plant species and 34 wildlife species (see table 5). Changes to plant species include:

- American fever-few (*Parthenium integrifolium*) was renamed wild quinine.
- White trout-lily (*Erythronium albidum*) was renamed white fawnlily.
- Mountain starwort (*Stellaria borealis spp. borealis*) was renamed boreal starwort.
- Kidney-leaved twayblade (*Listeria smallii*) was dropped from regional forester sensitive species list.

The following plant and insect (monarch butterfly) species were added to the regional forester sensitive species list and were analyzed for this supplemental environmental assessment.

Table 4. List of species added to the regional forester sensitive species list.

Common Name	Scientific Name
red baneberry	*Actaea rubra*
blue wild indigo	*Baptisia australis var. australis*
twining screwstem	*Bartonia paniculata*
lance grapefern/triangle moonwort	*Botrychium lanceolatum var. angustisetmentum*
bluntlobe grapefern	*Botrychium oneidense*
little grapefern/least moonwort	*Botrychium simplex (Botrychium simplex g. tenebrosum)*
large toothwort	*Cardamine maxima (syn. Dentaria maximia)*
awned sedge	*Carex atherodes*
fairywand	*Chamaelirium luteum*
Autumn coralroot	*Corallorhiza odontorhiza*
tufted hairgrass	*Deschampsia caespitosa*
monarch butterfly	*Danaus plexippus*
showy orchid	*Galearis spectabillis*
dwarf/lessor rattlesnake plantain	*Goodyera repens*
Philadelphia panicgrass	*Panicum philadelphicum*
strict blue-eyed grass	*Sisyrinchium montanum var. crebrum*
cranefly orchid	*Tipularia discolor*
great-spurred violet	*Viola selkirkii*

Modified Proposed Action and No Change Alternative

We reviewed the supplemental project for potential effects on regional forester sensitive species and found no difference between the modified proposed action and no change alternatives. A determination of **"may adversely impact individuals, but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing"** (abbreviated as MIIH) is reached for 29 Regional Forester Sensitive Species plants because no individuals were found during the botanical surveys for this project but suitable habitat present is for these plant species within the project area where remaining activities may take place. Suitable habitat for these plant species would not be appreciably reduced or substantially altered as a result of this project. A **"no impact"** determination is reached for seven plants that are obligate wetland plant species because they were not found during the botanical surveys for this project, proposed project activities do not intersect with their habitat, and their habitat is protected with Forest Plan standards and guidelines. Additional information regarding these and other species may be found in the botany report and in table 5.

In the short-term (10 years), proposed supplemental shelterwood removal cuts would create increased light conditions that may increase the number and species of wildflower species available, if a propagule source is present, for the monarch butterfly. However, those wildflower species may be lost in areas where broadcast herbicide application is conducted for reforestation purposes. There is also an estimated 125 acres of habitat conversion (forest to non-forest) from potential private shallow and deep well development within the project area within the cumulative effects timeframe. Considering these factors, a '**may adversely impact individuals, but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing'**' determination is reached for the monarch butterfly.

Table 5. Regional forester's sensitive wildlife species and their status and determinations within the project area

Species	Status in Original Proposal	Status in Supplemental Proposal	Project Area Habitat Status	Primary Habitat[a]	No Change Alternative	Modified Proposed Action
Mammals						
Little brown myotis	No	Yes	Occupied habitat	Mature mixed hardwood/ conifer	MIIH	MIIH
Northern flying squirrel	Yes	Yes	Suitable habitat	Mature mixed hardwood/ conifer	MIIH	MIIH
Tri-colored bat	No	Yes	Suitable habitat	Mature mixed hardwood/ conifer/edges	MIIH	MIIH
Birds						
Northern goshawk	Yes	Yes	Suitable habitat	Mature mixed hardwood/ conifer	MIIH	MIIH
Swainson's thrush	No	Yes	Suitable habitat	Mature mixed hardwood/ conifer/rRiparian	MIIH	MIIH
Reptiles and Amphibians						
Eastern hellbender	No	Yes	No suitable habitat	Large stream to river	No impact	No impact
Four-toed salamander	No	Yes	Suitable habitat	Forest riparian and wetlands	MIIH	MIIH
Timber rattlesnake	Yes	Yes	Suitable habitat	Mature mixed hardwood/ conifer	MIIH	MIIH
Wood turtle	Yes	Yes	Suitable habitat	Forest riparian and wetlands	MIIH	MIIH
Mollusks						
Creek heelsplitter	Yes	Yes	Suitable habitat	Medium to large stream	MIIH	MIIH
Long-solid mussel	Yes	Yes	No suitable habitat	Rivers	No impact	No impact
Rainbow mussel	Yes	Yes	No suitable habitat	Rivers	No impact	No impact
Round pigtoe	Yes	Yes	No suitable habitat	Rivers	No impact	No impact
Threeridge	Yes	Yes	No suitable habitat	Rivers	No impact	No impact

Species	Status in Original Proposal	Status in Supplemental Proposal	Project Area Habitat Status	Primary Habitat[a]	No Change Alternative	Modified Proposed Action
Wabash pigtoe	Yes	Yes	No suitable habitat	Rivers	No impact	No impact
White heelsplitter	Yes	Yes	No suitable habitat	Rivers	No impact	No impact
Invertebrates						
Eyed brown	No	Yes	Suitable habitat	Non-forested (hydric)	MIIH	MIIH
Green-faced clubtail	Yes	Yes	No suitable habitat	Small stream to river	MIIH	MIIH
Harpoon clubtail	Yes	Yes	Suitable habitat	Medium to large stream	MIIH	MIIH
Maine snaketail	Yes	Yes	Suitable habitat	Medium to large stream	MIIH	MIIH
Mocha emerald	No	Yes	No suitable habitat	Small forested streams/rivers/wetlands	MIIH	MIIH
Monarch butterfly	No	Yes	Occupied habitat	Open areas, edges with host and nectar-producing plants	MIIH	MIIH
Mustached clubtail	Yes	Yes	Suitable habitat	Small stream to river/wetlands	MIIH	MIIH
Rapids clubtail	Yes	Yes	No suitable habitat	Large stream to river/wetlands	No impact	No impact
Sable clubtail	No	Yes	Suitable habitat	Medium to large forested stream wetlands	MIIH	No impact
Ski-tipped emerald	Yes	Yes	No suitable habitat	Large stream	No impact	No impact
West Virginia white	No	Yes	Suitable habitat	Mature mixed hardwood/conifer	MIIH	No impact
Zebra clubtail	Yes	Yes	Suitable habitat	Medium stream	MIIH	No impact
Fishes						
Burbot	Yes	Yes	No suitable habitat	Reservoir/ impoundment to river	No impact	No impact
Mountain brook lamprey	Yes	Yes	Suitable habitat	Medium stream to river	MIIH	MIIH

Species	Status in Original Proposal	Status in Supplemental Proposal	Project Area Habitat Status	Primary Habitat[a]	No Change Alternative	Modified Proposed Action
Mountain madtom	Yes	Yes	No suitable habitat	River	No impact	No impact
Northern madtom	Yes	Yes	No suitable habitat	River	No impact	No impact
Ohio lamprey	Yes	Yes	No suitable habitat	Large stream to river	No impact	No impact
Spotted darter	Yes	Yes	No suitable habitat	River	No impact	No impact
Plants						
American ginseng	Yes	Yes	Suitable habitat	Mature mixed deciduous forest (mesic)	MIIH	MIIH
Autumn coralroot	No	Yes	Suitable habitat	Mature mixed deciduous forest (mesic)	MIIH	MIIH
Awned sedge	No	Yes	Suitable habitat	Non-forest (hydric)	No impact	No impact
Bartram shadbush	Yes	Yes	Suitable habitat	Mature mixed hardwood forests (mesic/hydric)	MIIH	MIIH
Blue wild indigo	No	Yes	Suitable habitat	Non-forest (hydric)	MIIH	MIIH
Blunt-lobe grapefern	No	Yes	Suitable habitat	Mature mixed deciduous forest (mesic)	MIIH	MIIH
Boreal bog sedge	Yes	Yes	Suitable habitat	Non-forest (hydric)	No impact	No impact
Boreal starwort	Yes	Yes	Suitable habitat	Mature mixed deciduous forest (mesic/hydric)	MIIH	MIIH
Bristly black currant	Yes	Yes	Suitable habitat	Mature mixed hardwood forests (mesic/hydric)	MIIH	MIIH
Butternut	Yes	Yes	Suitable habitat	Mature mixed deciduous forest (mesic/hydric)	MIIH	MIIH
Canada yew	Yes	Yes	Suitable habitat	Mature mixed deciduous forest (mesic/hydric)	MIIH	MIIH

Species	Status in Original Proposal	Status in Supplemental Proposal	Project Area Habitat Status	Primary Habitat[a]	No Change Alternative	Modified Proposed Action
Checkered rattlesnake-plantain	Yes	Yes	Suitable habitat	Mature mixed hardwood forest	MIIH	MIIH
Cranefly orchid	No	Yes	Suitable habitat	Mature mixed deciduous forest (mesic)	MIIH	MIIH
Creeping snowberry	Yes	Yes	Suitable habitat	Non-forest (hydric)	MIIH	MIIH
Fairywand	No	Yes	Suitable habitat	Non-forest	MIIH	MIIH
False Indian plantain	Yes	Yes	Suitable habitat	Non-forest (hydric)	MIIH	MIIH
Great-spurred violet	No	Yes	Suitable habitat	Mature mixed hardwood/conifer forests	MIIH	MIIH
Hooker's orchid	Yes	Yes	Suitable habitat	Mature mixed hardwood/conifer forests	MIIH	MIIH
Lanceleaf moonwort	No	Yes	Suitable habitat	Mature mixed deciduous forest (mesic)	MIIH	MIIH
Large toothwort	No	Yes	Suitable habitat	Mature mixed deciduous forest (mesic)	MIIH	MIIH
Least moonwort	No	Yes	Suitable habitat	Mature mixed deciduous forest (mesic)	MIIH	MIIH
Lesser rattlesnake plantain	No	Yes	Suitable habitat	Mature mixed deciduous forest (mesic)	MIIH	MIIH
Mountain wood fern	Yes	Yes	Suitable habitat	Mature mixed deciduous forest (mesic)	MIIH	MIIH
Philadelphia panicgrass	No	Yes	Suitable habitat	Non-forest (hydric)	MIIH	MIIH
Queen-of-the-prairie	Yes	Yes	Suitable habitat	Non-forest (hydric)	MIIH	MIIH
Red baneberry	No	Yes	Suitable habitat	Early to late mature forest; deciduous or mixed conifer	MIIH	MIIH
Rough cotton-sedge	Yes	Yes	Suitable habitat	Non-forest (hydric)	No impact	No impact
Showy orchid	No	Yes	Suitable habitat	Mature forest (hydric)	MIIH	MIIH

Species	Status in Original Proposal	Status in Supplemental Proposal	Project Area Habitat Status	Primary Habitat[a]	No Change Alternative	Modified Proposed Action
Stalked bulrush	Yes	Yes	Suitable habitat	Non-forest (hydric)	No impact	No impact
Strict blue-eyed grass	No	Yes	Suitable habitat	Open areas/edges	MIIH	MIIH
Swamp red currant	Yes	Yes	Suitable habitat	Mature mixed deciduous forest (mesic/hydric)	No impact	No impact
Thread rush	Yes	Yes	Suitable habitat	Non-forest (hydric)	No impact	No impact
Tufted hairgrass	No	Yes	Suitable habitat	Non-forest (hydric)	MIIH	MIIH
Twining screwstem	No	Yes	Suitable habitat	Non-forest (hydric)	No impact	No impact
White fawnlily	Yes	Yes	Suitable habitat	Mature deciduous forest (mesic)	MIIH	MIIH
Wild quinine	Yes	Yes	Suitable habitat	Non-forest (xeric)	MIIH	MIIH

[1] Primary habitat is listed above for each species and is not inclusive as the species may occupy other secondary habitats and/or require a specific habitat feature.
[2] MIIH = May adversely impact individuals, but not likely to result in a loss of viability in the planning area or cause a trend toward federal listing.

Species with Viability Concerns

Modified Proposed Action and No Change Alternatives

We reviewed the project for potential effects on the eleven species with viability concerns on the Allegheny National Forest. There is suitable habitat within the project area for eight of these species (see table 6). Five of the eight species (see table 6) with suitable habitat in the project area have been documented in the project area. There would be no adverse cumulative effects to any of the species with viability concerns in both alternatives, but habitat for some species may be slightly altered. Forest Plan standards and guidelines (USDA-FS 2007a, pages 74–89) and project design features will protect specialized habitats and features for these species. For additional information, please see the project wildlife report.

Table 6. Additional species with viability concerns and their status

Species with Viability Concerns	Suitable Habitat	Documented in the project area
Birds		
black-throated blue warbler	Yes	Yes
Cerulean warbler	No	No
golden-winged warbler	Yes	No
great blue heron	Yes	Yes
Henslow's sparrow	No	No
osprey	No	No
raven	Yes	Yes
red-shouldered hawk	Yes	Yes
Reptiles		
coal skink	Yes	No
eastern box turtle	Yes	No
Amphibians		
Jefferson salamander	Yes	Yes

Recreation

The eleven stands proposed for shelterwood removal cuts lie within Management Area 3.0–Even-aged Management, which provides a range of recreation opportunities in a Roaded Natural setting.

Modified Proposed Action

Project design features (see appendix B) include restricting hauling, felling, skidding, and road maintenance within 100 feet of forest road 186 (Allegheny Snowmobile Loop Connector Trail #17) during the snowmobile season and snowplowing to leave an adequate mat of snow for snowmobiling. With these project design features, impacts to the snowmobile trail are expected to be minimal from proposed activities. Creation of 189 acres of early structural habitat would provide opportunities for hunting wildlife species that utilize early structural habitat.

Regarding cumulative effects, supplemental proposed activities are consistent with past vegetation management and compatible with the recreational opportunity spectrum and current recreation activities and their use patterns. The modified proposed action would not contribute to any cumulative effects to the Recreational Opportunity Spectrum of the project area because the age class distribution of forested stands within the project area would vary little between the no-change alternative and implementation of the modified proposed action, except for the amount of early-structural habitat, which would increase by 189 acres within the next 20 years with the proposed supplemental shelterwood removal cuts. The Roaded Natural setting would be maintained under the modified proposed action.

No Change Alternative

Under the no change alternative, none of the proposed activities would occur, and there would be no additional effects to recreation beyond those described in the original South Branch Kinzua Creek Environmental Assessment. The Roaded Natural setting would be maintained under the no change alternative.

Scenery

Modified Proposed Action

Three stands proposed for shelterwood removal cuts are located along forest road 186 (Allegheny Snowmobile Loop Connector Trail #17), a Concern Level 2 travel way. Design features needed to lessen the large size of these roadside openings and meet the Scenic Integrity Level include a buffer to establish leave areas to minimize the impact of the removed canopy and paint, slash, and fencing project design features to reduce the impact of marking, logging, and reforestation activities (see appendix B and table below). The moderate Scenic Integrity Level will be met with these project design features and Forest Plan standards and guidelines.

Table 7. Scenery Design Features

Stand	Buffer Zone	Landings[1]	Slash	Concern Level	Scenery Integrity Level	View Facility	Treatment	Meets Scenery Integrity Level[2]
810043	Yes	Yes	Yes	2	M	Forest Road 186	Shelterwood removal	Yes
812010	Yes	Yes	Yes	2	M	Forest Road 186	Shelterwood removal	Yes
812037	Yes	Yes	Yes	2	M	Forest Road 186	Shelterwood removal	Yes

[1] No new landings will be developed along forest road 186 (Allegheny Snowmobile Loop Connector Trail #17).
[2] Design features are needed to meet scenery integrity levels (see appendix B)

Remaining stands proposed for supplemental treatments are in low Scenic Integrity Level areas or along roads that have a low concern level for scenery. All supplemental proposed treatments in these stands would meet the "Low" Scenic Integrity Level.

It is unlikely that any of the stands for which management activities have been proposed would change the overall landscape character of the project area. Due to the history of vegetation management within the project area (both public and private lands), the activities in the proposed action are consistent with past management and compatible with the current Scenic Integrity Levels of the area. Cumulatively, the effects resulting from past, proposed, and reasonably foreseeable future management activities would not exceed the established Scenic Integrity Levels of the project area.

No Change Alternative

Under the no change alternative, none of the supplemental proposed activities would occur, and there would be no additional effects to recreation beyond those described in the original South Branch Kinzua Creek Environmental Assessment.

Intensity Factor #2: The degree to which the modified proposed action affects public health or safety.

Modified Proposed Action

The modified proposed action would avoid adverse impacts to public health and safety through implementation of Forest Plan standards and guidelines, Pennsylvania best management practices, project design features, Office of Safety and Health Administration requirements, and standard operating safety procedures. Actions, such as warning signs and others, are standard precautionary measures that would be employed.

No Change Alternative

The no change alternative would also avoid adverse impacts to public health and safety through implementation of Forest Plan standards and guidelines, Pennsylvania best management practices, project design features, Office of Safety and Health Administration requirements, and standard operating safety procedures. Actions, such as warning signs and others, are standard precautionary measures that would be employed. Under the no change alternative, none of the supplemental proposed activities would occur, and there would be no additional effects to public health and safety beyond those described in the original South Branch Kinzua Creek Environmental Assessment.

Intensity Factor #3: Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

Please see the discussion further below regarding historic or cultural resources. Regarding other potentially unique characteristics:

- The modified proposed action is not located within and will not affect any of the following areas: wilderness, wilderness study areas, wild and scenic rivers, national recreation areas, scenic areas, historic areas, research natural areas, or experimental forests.
- The modified proposed action will not irreversibly affect soils that are designated as prime farmland or farmland of statewide importance. None of the proposed activities would result in designated farmland being converted to non-forest or non-agricultural uses.
- There are no National Wetland Inventory wetlands or floodplains located within the 11 stands proposed for shelterwood removal and additional reforestation activities. Any streams, springs, and seeps will be buffered. Under the modified proposed action and no change alternatives, Forest Plan standards and guidelines and Pennsylvania best management practices will be followed to protect these areas.

Intensity Factor #4: The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The activities proposed here are routine on the Allegheny National Forest and throughout the National Forest System. The effects are well known, and do not present any substantial scientific controversy.

Intensity Factor #5: The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The activities proposed here are routine on the Allegheny National Forest and throughout the National Forest System. The effects are well known, and do not involve highly uncertain, unique, or unknown risks.

Intensity Factor #6: The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

This project is limited to the activities proposed above in context of vegetative management. As a result, the decision made here will not establish a precedent for future actions with significant effects and will not represent a decision in principle about a future consideration.

Intensity Factor #7: Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

Cumulative effects have been addressed in context of beneficial and adverse effects. Please see the discussion above for intensity factor #1.

Intensity Factor #8: The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

A cultural resource survey and report, ***South Branch Kinzua Creek Project CRR #09-19-02-424***, were completed for the original South Branch Kinzua Creek project area and the report was submitted to the State Historic Preservation Office for their review. Concurrence was received from the State Historic Preservation Office on the ***No Historic Properties Affected*** finding for the project. In addition, any contracts would contain a provision for the protection of cultural resources should any sites be discovered during operations.

Intensity Factor #9: The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

Modified Proposed Action

There is no designated critical habitat for any federally threatened or endangered species on the Allegheny National Forest; therefore, implementation would not affect any designated critical habitat. A project-specific wildlife specialist reports was prepared, is available in the project file, and is incorporated by reference. The report concluded that implementation may affect, and is likely to adversely affect, the northern long-eared bat for both alternatives. The northern long-eared bat will be protected through Forest Plan standards and guidelines (USDA-FS 2007a, pages 81–82) and project design features (see appendix B). A no effect determination was reached for all other federally listed threatened and endangered species (small whorled pogonia, northeastern bulrush, northern riffleshell, clubshell, rayed-bean, sheepnoes, snuffbox, and rabbitsfoot) for the Allegheny National Forest for both alternatives.

Based on several factors, including survey data, the U.S. Fish and Wildlife Service revised the Indiana bat's range for Pennsylvania to reflect that the distribution of potential Indiana bat summer and winter habitat does not include the Allegheny National Forest (USDI Fish and Wildlife Service 2014). As such, the Indiana bat is not considered as a threatened and endangered species on the forest.

Although implementation may affect, and is likely to adversely affect, the northern-long eared bat under both alternatives, this project would not jeopardize the continued existence of the species. The primary factor cited in the proposed listing rule responsible for the decline of northern long-eared bat populations is white-nose syndrome. The U.S. Fish and Wildlife Service (2013) determined that although several activities, such as construction of physical barriers at cave accesses, mining, development, and timber harvest may modify or destroy northern long-eared bat habitat, these activities alone do not have significant, population-level effects on the species.

The impact of this project on individuals and habitat is not expected to adversely affect the conservation and recovery efforts for the species for several reasons, including but not limited to the following:

- Forest management and silviculture are vital to the long-term survival and recovery of the northern long-eared bat and the U.S. Fish and Wildlife Service have determined that when the prohibitions for the species included in the final 4(d) rule are applied to forest management activities, the potential impacts would be significantly reduced (USDI-FWS 2016).

- Conducting timber harvest activities or tree removal outside the hibernation period could conceivably result in direct mortality or injury to northern long-eared bat by incidental felling of roost trees, particularly if non-volant bats are present. In areas of extensive intact forest, the likelihood that a given harvest would result in the loss of a maternity colony is small. Suitable habitat, as well as potential maternity roosts and day roosts, are abundant and widely distributed across the project area. Additionally, there are well over 18.9 million potential roost trees on the Allegheny National Forest (Miles 2015). The likelihood of direct mortality from prescribed fire is extremely low as the proposed burning would occur in early spring or fall. Timber harvest is an important tool that could improve forest structure by creating canopy gaps and snags, by reducing stand density and mid-story clutter, and by increasing forest diversity to maintain suitable roosting and foraging habitat.

- This project would provide protection for the northern long-eared bat during its most sensitive life stages. There are no known occupied maternity roosts in the project area, and there are no activities proposed within ¼ mile of known hibernacula. Should maternity roosts be found in the vicinity of proposed activities in the future, conservation measures will be applied to avoid cutting or destroying them unless they are in immediate safety hazard.

- Forest Plan standards and guidelines implemented for Indiana bat (USDA-FS 2007a, pages 81–82, USDI-FWS 2007) will minimize potential harm or harassment to this species and retain key habitat components at the stand and landscape level.

No change alternative

Under the no change alternative, the supplemental proposed activities would not occur. Determinations reached for the nine federally listed threatened or endangered species would be the same as those for the modified proposed action.

Intensity Factor #10: Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The modified proposed action and no change alternatives comply with all applicable laws, regulations, and policies. These include the Clean Water Act, Wetlands and Floodplains Executive Orders, the Endangered Species Act, The National Historic Preservation Act, the National Environmental Policy Act, and the National Forest Management Act. The modified proposed action complies with all Forest Plan desired conditions, objectives, standards, and guidelines.

Archaeological Resources Protection Act

Cultural Resources are briefly described under Intensity Factor #8 above in this supplemental environmental assessment (page 16).

Clean Air Act

Warren County is identified as in non-attainment for sulfur dioxide. The area of non-attainment is localized in the city of Warren, and the surrounding communities of Conewango, Glade, and Pleasant Townships. The project area is in Elk and McKean Counties. Project area effects from the proposed action on the attainment of National Ambient Air Quality Standards are not expected to be significant. Any effects of the proposed actions on air quality would be quickly diffused over time within the project area (USDA-FS 2007b, page 59). The amount of pollutants added to the atmosphere by equipment implementing the proposed actions over time is not expected to exceed the National Ambient Air Quality Standards for attainment, nor is the proposed actions expected to have any effect on the sulfur dioxide non-attainment area in the vicinity of Warren, Pennsylvania.

Clean Water Act

Within the project area there are no streams or lakes on the 303(d) list. No significant effects to water quality standards are anticipated by implementing the proposed actions. Compliance with the Clean Water Act on the Allegheny National Forest is achieved with the implementation of project design features, Forest Plan standards and guidelines, and Pennsylvania best management practices.

Environmental Justice (Executive Order 12898)

Responses to the public scoping request did not identify any adversely impacted local minority or low-income populations. This project is consistent with the Forest Plan (USDA-FS 2007b, pages 3-433 to 3-436).

Federal Cave Resources Protection Act

No known caves exist within the project area; therefore, there would be no effects to caves.

National Environmental Policy Act (NEPA)

This act requires public involvement and consideration of potential environmental effects. The public was provided a scoping comment period beginning on November 26, 2019. A comment period is also provided in the release of this supplemental environmental assessment. Public comments received on the project are reviewed and responded to by the interdisciplinary team and the responsible official. An objection period will be provided for the draft decision that this environmental assessment supports. A final decision would follow any direction provided by the resolution of any potential objections. Consideration of potential environmental effects are provided in this supplemental environmental assessment, the South Branch Kinzua Creek Environmental Assessment, and their project files, as well as the tiering to the Forest Plan documents. The entirety of documentation for this supplemental environmental assessment supports compliance with the NEPA.

National Forest Management Act (Forest Plan Consistency)

Implementation of the proposed action is consistent with the intent of the Forest Plan's long-term goals and objectives provided for vegetation management and conforms to other resource standards and guidelines in the Forest Plan (USDA-FS 2007a). The project would be implemented without impairing the long-term productivity of National Forest System lands through implementation of design criteria. Measures to avoid or minimize effects include project design features, Forest Plan standards and guidelines, which at a minimum, meet the requirements of applicable laws and regulations, and Pennsylvania state standards, for the affected National Forest System lands. The analysis in this supplemental environmental assessment and supporting documentation in the project file show that the proposed action is consistent with the National Forest Management Act.

Native American Graves Protection and Repatriation Act

No Native American grave sites are known nor were any identified as a result of public scoping or consultation with tribal representatives.

Wetlands (Executive Order 11990)

See intensity factor #3 in this supplemental environmental assessment. This project does not propose any wetland developments or modifications. No significant effects are anticipated to wetlands in implementing the proposed action.

Wild and Scenic Rivers Act

There are no wild and scenic rivers in the area of the modified proposed action as described under intensity factor #3 in this supplemental environmental assessment; therefore, there are no impacts to wild and scenic rivers by implementing the proposed actions.

Authorities Related to Migratory Birds

The Migratory Bird Treaty Act is a criminal statute that applies to the actual or attempted hunting, taking, capturing, killing, or possession of certain migratory birds and their nests or eggs. Recent court decisions have addressed the Act's application to project-level work such as the South Branch Kinzua Creek project (see Sierra Club v. Martin, 110 F.3d 1551, 1555 [11th Cir. 1997]; Curry v. U.S. Forest Service, 988 F. Supp. 541, 550 [W.D. Pa. 1997]).

Executive Order 13186 was issued, in part, to ensure that environmental analyses of federal actions assess the impacts on migratory birds, and an expired Memorandum of Understanding between the U.S. Forest Service and the U.S. Fish and Wildlife Service has provided direction regarding migratory birds in the past. The effect of this project on migratory birds is discussed in the effects analysis of this supplemental environmental assessment and the original South Branch Kinzua Creek Environmental Assessment, and design criteria are in place to mitigate impacts to migratory birds. The South Branch Kinzua Creek project is consistent with all applicable requirements pertaining to migratory birds.

Agencies and Persons Consulted

The Forest Service consulted with the individuals/organizations on the NEPA mailing list, subsurface mineral owners, Federal, State, tribal, and local agencies (listed below) during the development of this environmental assessment:

Federal, State, and Local Agencies

U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service
Pennsylvania Department of Environmental Protection
Pennsylvania Game Commission
Pennsylvania State Historic Preservation Office

Tribes

The Forest Service consulted with the 15 federally recognized Tribes that have historic ties to the area.

Absentee Shawnee Tribe of Oklahoma
Eastern Shawnee Tribe of Oklahoma
Shawnee Tribe
Cayuga Nation
Delaware Tribe Historic Preservation Representatives
Delaware Nation
Oneida Indian Nation
Oneida Nation of Wisconsin
Onondaga Nation
Seneca Nation of Indians
Seneca-Cayuga Nation
St. Regis Mohawk Tribe
Stockbridge-Munsee Mohican Tribal Historic Preservation
Tonawanda Seneca Nation
Tuscarora Nation

Others

Elk County Commissioners

Literature Cited

Cedarholm, C.J., D.H. Johnson, R.E. Bilby, L.G. Dominguez, A.M. Garrett, W.H. Graeber, E.L. Greda, M.D. Kunze, B.G. Marcot, J.F. Palmisano, R.W. Plontnikoff, W.G. Pearcy, C.A. Simenstad, and PAGEC. Trotter. 2000. Pacific Salmon and Wildlife-Ecological Contexts, Relationships, and Implications for Management. Special Edition Technical Report, Prepared for D.H. Johnson and T.A. O'Neil (Manag. Dirs.), Wildlife-Habitat Relationships in Oregon and Washington. Washington Department of Fish and Wildlife, Olympia, Washington.

Hornbeck, J.W.; M.B. Adams, E.S. Corbett, E.S. Verry, J.A. Lynch. 1993. Long-term impacts of forest treatments on water yield: a summary for northeast USA. Journal of Hydrology 150:323-344.

Hornbeck, J.W.; Kochenderfer, J.N. 2000. Linkages between forest and streams: A perspective in time. *In:* Riparian management in forests of the continental Eastern United States. Verry, E.S.; Hornbeck, J.W.; Dolloff, C.A. (editors), 89–93.

Long, R., A. Hille, A. Stottlemyer, and R. Turcotte. FHM Evaluation Monitoring Progress Report FY2015: Evaluating and monitoring black cherry health trends in response to multi-year stressors in Northwestern Pennsylvania. Unpublished (September 2015), 4 pages.

Lynch, J.A.; Corbett, E.S. 1990. Evaluation of best management practices for controlling nonpoint pollution from silvicultural operations. Water Resources Bulletin 26(1): 41–52.

Miles, P. D. 2015. Forest Inventory EVALIDator web-application version 1.6.0.01. St. Paul, MN: U.S. Department of Agriculture, Forest Service, Northern Research Station. Available only on internet: http://apps.fs.fed.us/Evalidator/evalidator.jspage Accessed March 7, 2015.

Montgomery, D.R., G.E. Grant, and K. Sullivan 1995. Watershed Analysis: a framework for implementing ecosystem management. Water Resources Bulletin 31:369-386.

Pennsylvania Bureau of Forestry. Continuous Forest Inventory, PA BOF Resources, Volume 2, Issue 1: Black Cherry. Unpublished (2015), 4 pages.

Pennsylvania Department of Environmental Protection. 2005. Timber harvest operations field guide for waterways, wetlands and erosion control. Technical Guidance No. 3930-BK-DEP4016.

Scheetz, B.; Bloser, S. 2008. Research summary: Sediment reduction from environmentally sensitive maintenance practices on unpaved roads. Center for Dirt and Gravel Road Studies, Pennsylvania State University.

Siemion, J.; Burns, D.A.; Murdoch, P.S.; Germain, R.H. 2011. The relation of harvesting intensity to changes in soil, soil water, and stream chemistry in a northern hardwood forest, Catskill Mountains, USA. Forest Ecology and Management 261: 1510–1519.

Syracuse Environmental Research Associates, Inc. 2011. Glyphosate – Human Health and Ecological Risk Assessment, Final Report. SERA TR 052-22-03b. Report dated March 25, 2011.

U.S. Department of Agriculture, Forest Service. 2007a. Allegheny National Forest Land and Resource Management Plan and Record of Decision. Warren, PA.

U.S. Department of Agriculture, Forest Service. 2007b. Allegheny National Forest Final Environmental Impact Statement for the Land and Resource Management Plan. Warren, PA.

U.S. Department of Interior, Fish and Wildlife Service. 2007. United States Fish and Wildlife Service concurrence letter regarding determinations in the Revised Forest Plan Biological Assessment. January 2007. 21 pp.

U.S. Department of Interior, Fish and Wildlife Service. 2013. Endangered and threatened wildlife and plants; 12-month finding on a petition to list the eastern small-footed bat and the northern long-eared bat; listing the northern long-eared bat as an endangered species. Federal Register 78: 61046-61080.

U.S. Department of Interior, Fish and Wildlife Service. 2016. Endangered and threatened wildlife and plants; 4(d) rule for the northern long-eared bat. Federal Register 81: 1900-1922.

U.S. Environmental Protection Agency. 2020b. Nonattainment Areas for Criteria Pollutants (Green Book). [Web Page]. Located at: https://www.epa.gov/green-book Accessed 2020 February 24.

U.S. Government Printing Office. 2014. Federal Register Federal Volume 79, Number 132. Located at: http://www.gpo.gov/fdsys/pkg/FR-2014-07-10/html/2014-16087.htm Accessed 2020 February 24.

Appendix A: Response to Scoping Comments

Introduction

This appendix summarizes the scoping process for the South Branch Kinzua Creek Supplemental Environmental Assessment project and presents an analysis of the scoping comments received from the public. The scoping period began on December 19, 2019 when the scoping package was mailed to interested individuals and organizations, including subsurface mineral owners and those individuals and organizations that commented on the original South Branch Kinzua Creek project. The scoping package was also posted on the Allegheny National Forest website on December 18, 2019. The scoping news release was sent to local media on December 18, 2019. The South Branch Kinzua Creek Supplemental Environmental Assessment project was listed in the Allegheny National Forest schedule of proposed actions (SOPA) starting with the January 2020 issue. The scoping comment period for this project ended on January 21, 2020. Two individuals/organizations (listed below) submitted comments during the scoping period.

- Barb Sacheu
- Environmental Protection Agency

The respondents' comments are included in the project file and summarized here. Our responses to the scoping comments and concerns are provided below. No issues were identified by the interdisciplinary team or responsible official that led to formulation of another action alternative.

Comment 1: *I do not support this abusive assault on these trees. This agency is nothing but a destructive force for all forests owned by 328 million American citizens. We are appalled at the lousy job you are doing. I would rate the work of your agency as f minus. this comment is for the public record.*

Response: Comment noted. This comment is not site-specific.

Comment 2: *Please consider discussion of the tree species that will be removed from the overstory to allow sunlight to reach the ground to encourage seedling development. Also, please explain which tree species are being harvested after seedling growth.*

Response: Most of the overstory trees in the stands proposed for treatment would eventually be removed and could include all tree species found on the Allegheny National Forest. We are using a shelterwood sequence to regenerate the proposed stands. A shelterwood sequence usually involves two timber harvest entries. The first entry is the shelterwood seed cut (approved in the original South Branch Kinzua Creek decision), which removes about a third of the stocking to allow more sunlight to reach the forest floor. Once adequate desirable tree seedlings are established, the remaining overstory trees are removed in the shelterwood removal cut (proposed in the supplemental environmental assessment), except for reserve trees and reserve areas, which allows the established regeneration to grow into a new stand of trees.

Comment 3: *We suggest discussion to explain and identify the additional 189 acres of regeneration of harvest areas proposed to be added within Management Area 3.0 of the National Forest System. If applicable, the document should identify any aquatic resources that may be temporally or permanently impacted from harvest operations and provide an explanation of any*

techniques being used to minimize and/or buffer any proposed impacts. Identify any stream and wetlands crossings and what BMP's may be used to reduce impacts.

Response: The stands proposed for treatment were shown on Map 2 of the scoping package and listed in the scoping proposal. Effects to aquatic resources are described in the hydrology specialist report and summarized in this supplemental environmental assessment.

Forest Plan standards and guidelines, Pennsylvania best management practices are designed to maintain and protect the high-quality cold-water fisheries and wetlands. Riparian buffers will be identified along all streams (e.g. 100 feet from any perennial streams, and 50 feet from intermittent streams) and no timber harvesting will be allowed in this buffer. Wetlands, springs and seeps will be protected with a 25-foot no activity buffer and a 25- to 100-foot zone from these resources where 50 percent canopy cover will be maintained. Vernal pools will be protected with a 100-foot no activity buffer and a 100- to 200-foot zone where 50 percent canopy cover will be maintained.

No stream or wetland crossings are anticipated from this project, but if they are needed Forest Plan standards and guidelines and Pennsylvania best management practices will be followed.

Comment 4: *The document should address which existing roads will be used and if new roads may be constructed.*

Response: No new roads are being proposed in the supplemental environmental assessment. Haul roads are addressed in the original environmental analysis for the South Branch Kinzua Creek project. For additional information, the original analysis and related documents are available online at https://www.fs.usda.gov/project/?project=17077.

Comment 5 *We recommend including identification of the herbicide that will be used for native and nonnative invasive plant species management and explanation of how the herbicide will be applied.*

Response: No additional herbicide application is being proposed in the supplemental environmental assessment. Herbicide application (glyphosate and sulfometuron methyl) is addressed in the original environmental analysis for the South Branch Kinzua Creek project.

Comment 6*: Please address how stormwater will be managed during harvesting and explain if any erosion and sediment control plans that will used.*

Response: Stormwater permits are not required for silvicultural activities. Stormwater and erosion will be managed during harvesting through the implementation of Forest Plan standard and guidelines, Pennsylvania best management practices (PA-DEP 2005), and project design features (including soil erosion and sedimentation plans) to minimize soil erosion and sedimentation and protect water quality. The Forest Service implements the National Best Management Practice Monitoring Program that assesses best management practice implementation and effectiveness associated with water quality and Clean Water Act objectives and implements corrective actions and adaptive management actions for deficiencies (USDA FS 2016). Also, see soil and hydrology sections of the supplemental environmental assessment.

Comment 7*: Also, please address if any endangered or threatened species will be impacted and what mitigative measures will take place, if needed.*

Response: Effects to endangered or threatened species are summarized in the supplemental environmental assessment on pages 9–13; 16–17 and in the original South Branch Kinzua Creek Environmental Assessment. Design criteria are listed in the Forest Plan and in the appendix B of the supplemental environmental assessment.

Literature Cited

U.S. Department of Agriculture, Forest Service. 2016. National best management practices (BMP) program national core BMPs, monitoring protocols and forms, and national database. [http://fsweb.wo.fs.fed.us/wfw/watershed/national_bmps/index.html].

Appendix B: Project Design Features

All applicable forest plan standards and guidelines related to management area 3.0 (USDA-FS 2007a, pages 113–115) and those pertaining to all relevant resources would be implemented along with best management practices and project design features listed below to eliminate or minimize adverse impacts. Also, those standards and guidelines, best management practices and the project design features found in the original South Branch Kinzua Creek project decision will also be followed.

Project design features are highlighted applications of the Forest Plan standards and guidelines. In some cases, the standards and guidelines provide options for how they may be applied. A design feature clarifies, where necessary, how these standards and guidelines may apply to specific actions in the project proposal.

Project design features for modified proposed action alternative include:

Botany

- Any areas proposed for an activity that would result in ground disturbance and were not surveyed previously for target plants will be surveyed prior to the disturbance and during the appropriate time of year when target plants are identifiable to species **(USDA-FS 2007a, page 89)**.
- If any regional forester sensitive species or federally listed plant species is identified prior to or during project implementation, project activities will cease and the district botanist will be notified to determine potential impacts and mitigation measures **(USDA-FS 2007a, page 89)**.
- Certified weed-free straw will be used for erosion control **(USDA-FS 2007a, page 53).**
- Native, local genotype seeds/plants will be used in restoration **(UDA-FS 2007a, page 53).**
- In order to reduce the potential for introduction or spread of non-native invasive plant species, an equipment cleaning provision will be included in timber sale and other contracts **(USDA-FS 2007a, page 53).**

Heritage

- Site-specific areas are not listed where heritage sites occur due to the confidential nature of the information. See Forest Plan for standards and guidelines for heritage resources. Appropriate heritage resources personnel will be contacted concerning ground disturbing activities prior to formalizing any sale or implementation contract to include any design features in contracts or agreements needed to protect heritage sites. Also, in any contract or agreement, the following statement will be included, as appropriate: If any previously unknown or unrecorded cultural materials are discovered during project implementation, all activity in the area should cease and the appropriate heritage resource personnel notified. A heritage resource specialist will evaluate the situation and determine the proper course of action **(USDA-FS 2007a, page 62)**.

Water

- In the **Glad Run Tributary 1** small watershed, shelterwood removal cuts for stands 812010, 812037, 812039 (from the original decision), 812066, and 812067 will be staggered to ensure that no more than 25 percent of the watershed would be in the 0 to 5 year age class at any point during implementation of the project and that no more than 25 percent of the basal area within the watershed would be removed in any five year period during implementation of the project **(USDA-FS 2007, page 74)**.

- In **Glad Run Tributary 2** (stand 813022 and 813023) and **Unnamed Tributary to Hubert Run** (stand 811019), shelterwood removal harvests will not be completed earlier than 2025 due to completed removal harvests in 2019 **(USDA-FS 2007, page 74)**.

Vegetation

- Reserve areas will be placed in the northern tip of stand 812066 and in the southwestern tip of stand 812067 **(USDA-FS 2007a, page 68)**.

- Shelterwood removal cuts for stands 812010, 812037, 812039 (from the original decision), 812066, and 812067 will be staggered so that no temporary openings greater than 40 acres are created during implementation. Regenerating stands must be greater than 15 feet in height before adjacent shelterwood removal cuts occur if they would result in a temporary opening greater than 40 acres in size **(USDA-FS 2007a, page 68)**.

Wildlife

- Maintain the existing conifer component and retain all conifer greater than 18 inches in diameter at breast height in all treatment areas **(USDA-FS 2007a, pages 65 and 84).**

- In stand **810043,** follow Forest Plan standards and guidelines to protect vernal pool in the southwest portion of the stand near the road. Consider wildlife reserve areas in wet areas in the southwest portion of the stand **(USDA-FS 2007a, pages 74-78)**.

- In stand **812037**, protect vernal pools, seeps, and ephemeral wet areas in the western 1/3 portion of the stand both north and south of the road. Some of these wet areas are within existing wildlife reserve areas. Retain all cucumber trees within the stand **(USDA-FS 2007a, pages 74-78)**.

- In stand **812067,** a large rock ledge and boulder area exists in the southern part of the stand along the border. Retain in wildlife reserve area or exclude from stand treatment **(USDA-FS 2007a, page 80)**.

- In stand **812068,** boulders and rocks exist the northeast portion of the stand. Consider retaining in wildlife reserve area **(USDA-FS 2007a, page 80)**.

- In stand **813014,** protect seeps and ephemeral wet areas in the western portion of the stand Some of these water sources are within existing wildlife reserve areas **(USDA-FS 2007a, pages 74-78)**.

- In stand **813022**, protect vernal pools, seeps, and ephemeral wet areas in the western 1/4 portion of the stand and the extreme northern portion of the stand. Some of these water sources are within existing wildlife reserve areas or have been excluded from the stand

(USDA-FS 2007a, pages 74-78).

- In stand **813023,** protect seeps, and ephemeral wet areas in the western portion of the stand and the along and near the entire eastern border. Some of these water sources are within existing wildlife reserve areas or have been excluded from the stand **(USDA-FS 2007a, pages 74-78)**.

- In stand **813027,** protect seeps and ephemeral wet areas in the southern and eastern portion of the stand. Some of these water sources are within existing wildlife reserve areas **(USDA-FS 2007a, pages 74-78)**.

Recreation/Scenery

- Hauling and road maintenance on forest road 186 (snowmobile trail) will be restricted to times other than weekends or holidays during the winter activity season **(USDA-FS 2007a, page 60)**.

- Felling or skidding activities within 100 feet of forest road 186 (snowmobile trail) will be restricted to times other than weekends or holidays during the winter activity season **(USDA-FS 2007a, page 60)**.

- Skidding activities will not occur on forest road186 **(USDA-FS 2007a, page 60)**.

- All commercial and administrative traffic will travel with their lights on during favorable snowmobile conditions **(USDA-FS 2007a, page 61)**.

- Snowplowing activities on forest road 186 will leave an adequate mat of snow for snowmobiling **(USDA-FS 2007a, page 61)**.

- In stands **810043**, **812010**, and **812037,** leave areas of ¼ acre in size shall laid out in a natural or random pattern and will be designated in the field by a recreation specialist **(USDA-FS 2009, pages 9 and 10)**.

- In stands **810043**, **812010**, and **812037,** tree marking paint will be applied on the side away from visually sensitive roads (forest road 186) so paint will not be visible **(USDA-FS 2009, pages 9 and 10)**.

- Along forest road 186, slash shall be pulled back 50 feet from the edge of the road and for an additional distance of 50–100 feet, slash shall be lopped and scattered to a depth of 3 feet (stands **810043**, **812010**, and **812037**) **(USDA-FS 2007a, pages 9 and 10)**.

Soils

- In stand **811019,** place reserve areas, limit skidding (avoidance), seasonal restrictions to protect sensitive soils (group 3) in the northwest and southern portion of the stand **(USDA-FS 2007a, pages 73)**.

Literature Cited

U.S. Department of Agriculture, Forest Service. 2007a. Allegheny National Forest Land and Resource Management Plan and Record of Decision. Warren, PA.

U.S. Department of Agriculture, Forest Service. 2009. Allegheny National Forest Scenery Implementation Guide, Version 1.2, Warren, PA.